EJERCICIO PRODUCTO CRUZ EN $\mathbb{R}^3$

```
sage] var('i,j,k')
```

```
(i, j, k)
```

```
sage] c=matrix([[i,j,k],[1,3,-2],[3,-1,-1]])
sage] c
```

$$\left(\begin{array}{rrr} i & j & k \\ 1 & 3 & -2 \\ 3 & -1 & -1 \end{array}\right)$$

```
sage] c.det()
```

$$-10k - 5j - 5i$$

UxV = - 5 i + 5j - 10k

| UxV |= $\sqrt{x^2 + y^2 + z^2}$

| UxV |= $\sqrt{(-5)^2 + (5)^2 + (-10)^2}$

| UxV |=$\sqrt{25 + 25 + 100}$

| UxV |=$\sqrt{150}$

Area del palalelogramo: | UxV |=$\sqrt{150}$